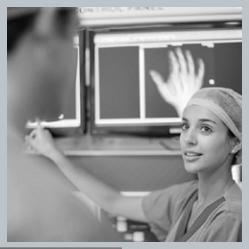
www.szreach.com

Reach Product Directory

Capturing, Streaming and Sharing



About Reach

SZ Reach Tech Co., Ltd, founded in 2003, an international high-tech enterprise, aims to provide the most advanced products and compressive solutions involving information recording and streaming system in the fields of Education, Training, Healthcare and Video conferencing.

- Live streaming of all your information, including the audio and video signals, as well as the computer screen signals synchronously, clearly and smoothly without the restriction of location and place.
- Recording your media information which can be replayed anytime anywhere.
- Based on an IP network, anywhere to receive the signals
- User-friendly interface, easy for anyone to operate.
- Special hardware platform, embedded operating system, high reliability, easy maintenance and can scale to meet any size.

REACH is constantly refining its products to make customers realize their full potential and maximize profit by helping customers train and create a highly skilled workforce.

Reach

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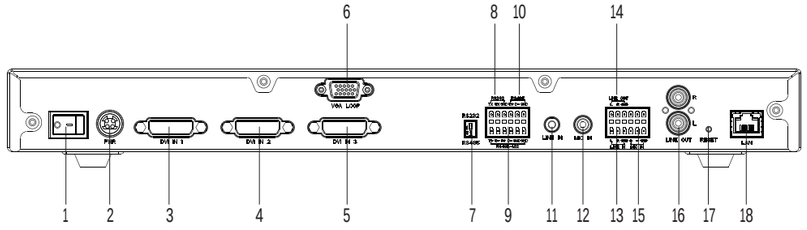
Bee 7 & Bee 7 Pro

BEE70 BEE71

Key Features

- **High quality of videos**
  Bee 7 Supports SD video inputs;
  Bee 7 Pro support SD and up to 1080P HD video inputs.
- **High quality of VGA signals**
  Resolution up to 1920 x 1200 and frame rate up to 30fps.
- **Easy to start recording**
  Supports both scheduled recording and simple control panel one-button recording.
- **Free from virus attacks**
  The embedded device with non-PC-architecture operates in stable state and impervious to virus attacks.
- **Convenient for expansion**
  One compact device for one classroom or lecture hall, which allows for convenient expansion.

Interface



1	Power Switch	7	RS232/485 Switch	13	Line In 1 (reserved)
2	Power Input	8	RS232	14	Line Out 2 (balanced)
3	Video In	9	RS485	15	Mic In 2 (balanced)
4	Video/VGA In	10	RS485/422	16	Line Out 2 (reserved)
5	VGA In	11	Line In 1 (unbalanced)	17	Reset
6	VGA LOOP	12	Mic In 1 (unbalanced)	18	LAN

Bee 7 and Bee 7 Pro are REACH's new generation of lecture capture device specialized for the education market. Bee 7 is for SD video capture, Bee 7 Pro is for HD video capture. Working together with REACH's Media Center, Bee 7 and Bee 7 Pro allow you to view live and play back course videos. Bee 7 and Bee 7 Pro are applied on an embedded hardware platform and therefore ensure a high recording quality and a stable performance. In addition. Bee 7 and Bee 7 Pro are easy to deploy and convenient to maintain, which is suitable for all types of schools.

Specifications

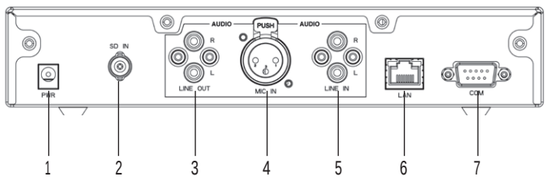
Capture Options (Bee 7)	SD Video + SD Video + VGA SD Video + VGA + VGA SD Video + VGA
Capture Options (Bee 7 Pro)	Video (HD/SD) + Video (HD/SD) + VGA Video (HD/SD) + VGA + VGA Video (HD/SD) + VGA
Video	Input format: HDMI, DVI, RGBHV, YPbPr, CVBS HDMI and YPbPr: 720P@50@60, 1080i@50@60, 1080p@25@30@50@60 CVBS: 480i, 576i (NTSC and PAL) RGBHV resolution: 640x480 up to 1600x1200 DVI: 640x480 up to 1920x1200
Encoding	H.264 HP Frame rate up to 30fps Bitrate from 128Kbps to 4Mbps
VGA	Resolution from 640x480 to 1600x1200 Supports HDMI, VGA and DVI input Supports input from computer, visualizer and electronic whiteboard Encoding: H.264 HP High frame rate up to 30fps Bitrate from 128Kbps to 4Mbps
Audio	Supports balanced and unbalanced audio in; Provides mixing of Mic in and line in
Recording Format	Supports SCORM 1.2 Supports insert copyright picture on videos Supports display static subtitle on videos
Storage	Capacity of 500GB Around 1000 hours recording (depends on bit rate settings)
Management and Operation	Control Panel Web page Reach Manager Reach Media Center Central Control System (AMX, Crestron, etc.) Supports PTZ camera control
Dimensions	Length: 430mm (16.93") Width: 332mm (13.07") Height: 44.5mm (1.75") 19-inch rack-mountable, 1U height
Environmental	Operating temperature: 0°c~50°c (32°F~122°F) Operating humidity: 5% to 95%
Power	12V/9.2A, 70W

SD Encoder ENC110

Key Features

- **H.264 HP encoding**
  Adopting H.264 HP video codec, ensure an IP-based signal transmission.
- **High video quality**
  Provides a high video quality with the 30fps.
- **Low delay**
  Delivers video to clients in sub-second.
- **SDK available**
  Provides SDK to facilitate the integration with 3rd party video and audio systems.
- **Supports RTSP and TS**
- **Supports PTZ camera control**

Interface



1	Power Input	5	Line In
2	Composite Video in (BNC)	6	LAN
3	Line Out (reserved)	7	COM (RS232)
4	MIC In (XLR)		

REACH SD Encoder is used to capture SD video signals. With ENC110 and cameras with output interface for SD signals, video and audio signals from the DVD player can be transmitted together through the IP network. SD Encoder adopts H.264 HP video codec, providing a high image quality with less bandwidth consumption.

Specifications

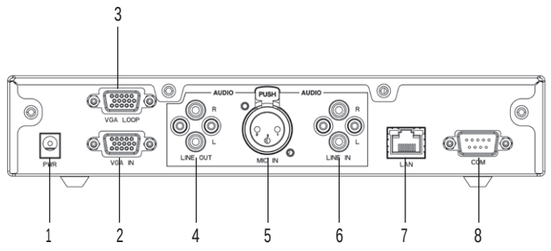
Management	Web interface EncoderManager
Definition	CIF 4CIF NTSC and PAL
Encoding	Video encoding: H.264 HP Audio encoding: AAC
Frame Rate	1 to 30fps
Audio Sampling Rate	44.1K 48K
Bandwidth Control	128Kbps to 10Mbps VBR CBR
Dimensions	Length: 240mm (9.45") Width: 170mm (6.69") Height: 44.5mm (1.75")
Environmental	Operating temperature: -20ºC to 60ºC (-4ºF~140ºF) Relative humidity: 5% to 95% Storage and transport temperature: -20ºC to 80ºC (-4ºF~176ºF)
Power	DC 12V/3A, 8W

VGA Encoder ENC120

Key Features

- **H.264 HP encoding**
  Adopting H.264 HP video codec, ensure an IP-based signal transmission.
- **High video quality**
  Provides a high video quality with the maximum resolution of 1400x1500 and frame rate of 30fps.
- **Low delay**
  Delivers video to clients in sub-second.
- **SDK available**
  Provides SDK to facilitate the integration with 3rd party video and audio systems.
- **Supports RTSP and TS**

Interface



1	Power Input	5	MIC In (XLR)
2	VGA In	6	Line In
3	VGA Loop Out	7	LAN
4	Line Out (reserved)	8	COM (RS232)

REACH VGA Encoder is used to capture VGA signals. With ENC120, signals of the PC screen, electronic whiteboard, and projector can be easily transmitted on the IP network. VGA Encoder adopts H.264 HP video codex, providing a high image quality with less bandwidth consumption. ENC120 can transmit both VGA and sound signals at the same time.

Specifications

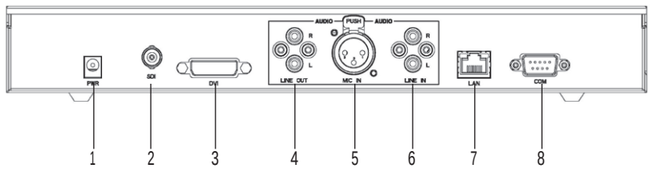
Management	Web interface EncoderManager
VGA Input	640×480, 800×600, 1024×768, 1280×720, 1280×768, 1280×800, 1280×900 1280×960, 1280×1024, 1366×768, 1400×1050, 1440×900
Frame Rate	1 to 30fps
Audio Sampling Rate	44.1K 48K
Encoding	Video: H.264 HP Audio: AAC
Bandwidth Control	128Kbps to 10Mbps VBR CBR
Dimensions	Length: 240mm (16.93") Width: 170mm (13.07") Height: 44.5mm (1.75")
Environmental	Operating temperature: -20° C to 60° C (-4°F~140°F) Relative humidity: 5% to 95% Storage and transport temperature: -20° C to 80° C (-4°F~176°F)
Power	DC 12V/3A, 10W

HD Encoder ENC1200

Key Features

- **H.264 HP encoding**
  Adopting H.264 HP video codec, ensure an IP-based signal transmission.
- **High video quality**
  Provides a high video quality with the 30fps and up to1080p definition.
- **Low delay**
  Deliver video to clients in sub-second.
- **SDK available**
  Provide SDK to facilitate the integration with 3rd party video and audio systems.
- **Supports RTSP and TS**
- **Supports PTZ camera control**

Interface



1	Power Input	4	Line Out (reserved)	7	LAN
2	HD SDI In	5	MIC In (XLR)	8	COM (RS232)
3	DVI-I In	6	Line In		

REACH ENC1200 is used to capture HD video signals. It can capture video signals up to 1080p. With ENC1200, various HD videos can be transmitted on the IP network as needed. Adopting H.264 HP video codec, ENC1200 provides a high image quality with less bandwidth consumption.

Specifications

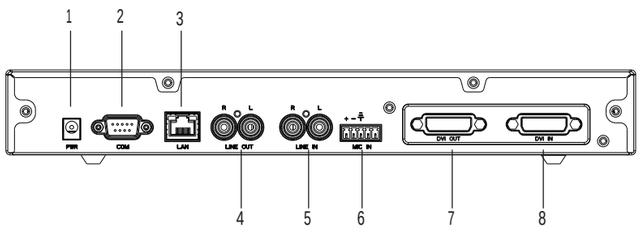
Management	Web interface EncoderManager
SDI Input	480i, 576i, 1280×720p@50@60, 1920×1080i@50@60, 1920×1080p@25@30
DVI-I Input	480i, 576i, 1280×720p@50@60, 1920×1080i@50@60, 1920×1080p@25@30@50@60
DVI-VGA Input	640×480@60@72@75@85, 800×600@60@72@75@85, 1024×768@60@70@75@85, 1280×720@60, 1280×768@60, 1280×800@60 1280×960@60, 1280×1024@60@75, 1366×768@60, 1400×1050@60 1440×900@60
Frame Rate	1 to 60fps
Audio Sampling Rate	44.1K 48K
Encoding	Video: H.264 HP Audio: AAC
Bandwidth Control	128Kbps to 20Mbps VBR CBR
Dimensions	Length: 430mm (13.78") Width: 332mm (13.07") Height: 44.5mm (1.75")
Environmental	Operating temperature: 0° C to 50° C (32°F~122°F) Relative humidity: 5% to 95% Storage and transport temperature: -20° C to 80° C (-4°F~176°F)
Power	DC 12V/3A, 10W

HD Encoder ENC1500

Key Features

- **H.264 HP encoding**
  Adopting H.264 HP video codec, ensure an IP-based signal transmission.
- **High video quality**
  Provides a high video quality with the 30fps and up to 1080p definition.
- **High VGA resolution**
  Supports capture VGA signals with the maximum resolution of 1920x1200@60Hz.
- **Low delay**
  Deliver video to clients in sub-second.
- **SDK available**
  Provide SDK to facilitate the integration with 3rd party video and audio systems.
- **Supports RTSP and TS**
- **Supports PTZ camera control**

Interface



1	Power Input	4	Line Out (reserved)	7	DVI-I Out
2	COM	5	Line In	8	DVI-I In
3	LAN	6	Mic In (with phantom power)		

REACH ENC1500 is used to capture HD video signals. It can capture video signals up to 1080p and VGA signals with the maximum resolution of 1920x1200. With HD Encoder (ENC1500), various HD videos and VGA signals can be easily transmitted on the IP network as needed. Adopting H.264 HP video codec, ENC1500 provides a high image quality with less bandwidth consumption.

Specifications

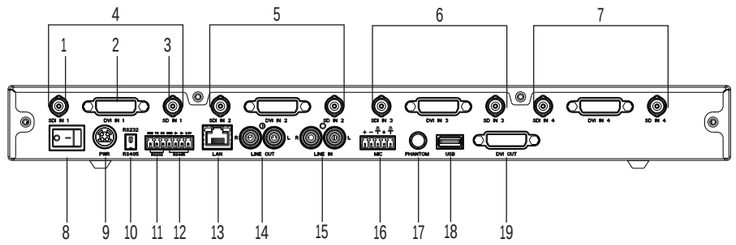
Management	Web interface
DVI-I Input	1280×720p@50@60 1920×1080i@50@60 1920×1080p@25@30@50@60
DVI-VGA Input	800×600, 1024×768, 1280×720, 1280×768, 1280×800, 1280×960, 1280×1024, 1366×768, 1400×1050, 1440×900, 1600×1200, 1920×1080, 1920×1200
Frame Rate	720p: 1 to 60fps 1080p: 1 to 30fps VGA: 1 to 30fps
Encoding	Video: H.264 HP Audio: AAC
Bandwidth Control	128Kbps to 20Mbps
Dimensions	Length: 240mm (9.45") Width: 170mm (6.70") Height: 44.5mm (1.75")
Environmental	Operating temperature: -20° C to 50° C (32°F~122°F) Relative humidity: 5% to 95% Storage and transport temperature: -40° C to 80° C (-4°F~176°F)
Power	DC 12V/3A

MCE Encoder MCE 400

Key Features

- **Multiple inputs**
  Supports up to 4 HD/SD/VGA inputs, video definition up to 1080p.
- **H.264 HP encoding**
  Adopting H.264 HP video codec enable IP-based signal transmission.
- **Low delay**
  Deliver video to clients in sub-second.
- **Supports RTSP and TS**
- **Supports PTZ camera control**

Interface



1	SDI In	8	Power Switch	15	Line In
2	DVI-I In	9	Power In	16	MIC In (with Phantom Power)
3	SD In (BNC)	10	RS485/RS232 Switch	17	48V Phantom Power Switch
4	Video Input Module 1	11	RS485	18	USB2.0 (reserved)
5	Video Input Module 2	12	RS232	19	Combined Video Out
6	Video Input Module 3	13	LAN (100M/1000M)		
7	Video Input Module 4	14	Line Out (reserved)		

REACH MCE400 is an encoder designed to capture multiple inputs. It supports capture maximum 4 HD/SD/VGA inputs, and then combines inputs in one video stream for IP transferring. Adopting H.264 HP codex, MCE400 provides a high image quality with less bandwidth consumption.

Specifications

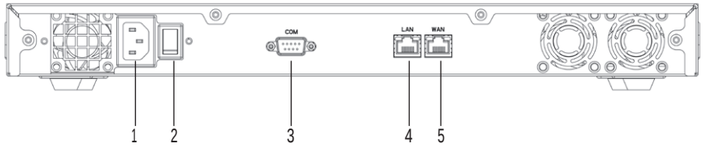
Video Codec		H.264 HP
DVI-I Input	**DVI-VGA**	640X480@60@72@75@85, 800X600@60@72@75@85 1024X768@60@70@75@85, 1280X720@60, 1280X768@60 1280X800@60, 1280X960@60, 1280X1024@60@75 1366 X768@60, 1400X1050@60, 1440X900@60,1600 X1200@60
	DVI	480i, 576i, 1280X720p@50@60 1920X1080i@50@60, 1920X1080p@25@30@50@60
SD input	**Format**	PAL, NTSC
	Definition	CIF, 4CIF
Bitrate		128Kbps-10Mbps
Audio Codex		AAC
Audio Sampling Rate		44.1K, 48K
Bitrate		128Kbps-10Mbps
Audio Bitrate		64Kbps~128Kbps
Combined Video Output		640 X480 D1 (720 X576, 720 X480) 1024 X 768@60Hz 1280 X 1024@60Hz 720p 1080p
System Function		Camera remote control Remote upgrade Add title on video Show current time on video
Power		DC 12V/9.5A
Dimensions		Length: 430mm (16.93") Width: 243.5mm (9.59") Height: 44.5mm (1.75")
Environmental		Storage and transport temperature: -40~80ºC (-40ºF~176ºF) Relative humidity: 5%~95% Operating temperature: -20~60ºC (-4ºF~140ºF)

Media Conqueror *Beyonsys™*

Key Features

- **Synchronized recording**
  Record audio signal and a maximum of 3-ch video/VGA signals.
- **Supports for the CCS**
  Supports the CCS provided by manufacturers such as AMX and Crestron.

Interface



1	Power Input	3	COM (RS232)	5	WAN
2	Power Switch	4	LAN		

Being a part of the REACH distributed recording and streaming system, Media Conqueror receives video and audio streams from the encoder, supports signal recording, live streaming and video playing on-demand. Media conqueror uses specialized hardware device, and its embedded system is safe, effective, stable, and reliable. Media Conqueror provides a user-friendly web interface and supports the Central Control System (CCS), making the system easy to use and applicable for organizations including hospitals, enterprises, governments, and schools.

Specifications

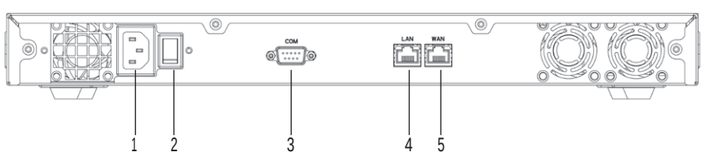
Management	Web interface Central control system (AMX, CRESTRON, etc.) Front panel (One Button Recording) Reach Media Center
Storage and File Management	Hard disc inside, capability up to 2TB
Dimensions	Length: 430mm (16.93") Width: 373mm (14.69") Height: 45mm (1.77") 19" rack-mountable, 1U height
Environmental	Operating temperature: 0ºC to 50ºC (32ºF~122ºF) Relative humidity: 5% to 95% Storage and transport temperature: -20ºC to 80ºC (-4ºF~176ºF)
Power	100–240VAC, 50–60Hz, 100W

Media Conqueror *Powolive™*

Key Features

- **Synchronized recording**
  Record audio signals and a maximum of 6-ch video/VGA signals or a maximum of 4-ch HD signals.
- **Mark function**
  Add annotations to the recording video.
- **Scheduled recording**
  Start or stop recording as scheduled.
- **Live streaming**
  Supports live streaming of video and audio signals in unicast and multicast mode.
- **Low delay**
  Live streaming delay less than 0.5s.
- **VOD**
  Supports video on-demand by a maximum of 200 users.
- **Multi-stream mode**
  Video with multi-stream, support enlarge any video.
- **Supports for the CCS**
  Supports the CCS provided by manufacturers such as AMX and Crestron.

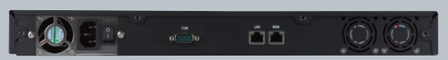
Interface



1	Power Input	3	COM (RS232)	5	WAN
2	Power Switch	4	LAN		

Being a part of the REACH distributed recording and streaming system, REACH Media Conqueror receives video and audio streams from the encoder, supports signal recording, live streaming and video playing on-demand. Media Conqueror uses specialized hardware device, and its embedded system is safe, effective, stable, and reliable. It provides a user-friendly web interface and supports the CCS, making the system easy to use and applicable for organizations including hospitals, enterprises, governments, and schools.

Specifications



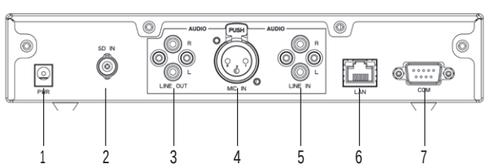
Management	Web interface Central control system (AMX, CRESTRON, etc.) Front panel (One Button Recording) Reach Media Center
Storage and File Management	Hard disc inside, capability up to 2TB File authorization to different users upport FTP
User Management	Administrator, Operator, Common user, Guest 4 different levels user Common user can be classified to different groups Support LDAP
Dimensions	Length: 430mm (16.93") Width: 373mm (14.69") Height: 45mm (1.77") 19" rack-mountable, 1U height
Environmental	Operating temperature: 0ºC to 50ºC (32ºF~122ºF) Relative humidity: 5% to 95% Storage and transport temperature: -20ºC to 80ºC (-4ºF~176ºF)
Power	100–240VAC, 50–60Hz, 100W

Kite 7 KITE70

Key Features

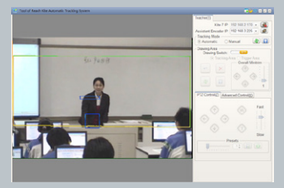
- **Automatic tracking of presenter**
  REACH Kite 7 camera tracking system is designed to control the camera to track the movement of the target presenter automatically without human interference.
- **Accurate tracking**
  Combining human characteristics recognition and polygonal region tracking technologies, REACH Kite 7 can accurately identify and track personal characteristics. Reach Kite 7 has a strong anti-interference capability, allowing it to work normally under the interference of noise, electromagnetic wave, and infrared ray upon locking of a target.
- **Normalized presentation**
  When tracking the teaching process, REACH Kite 7 does not require the presenter or audience to wear, click, or touch additional device. In addition, the tracking system allows the normalization of the teaching process without any interference of the administrator.
- **Simple installation and easy debugging**
  Reach Kite 7 can track presenter's movement without additional auxiliary cameras.The device debugging is based on the IP network and real-time on-site images.Network-based debugging and the reduced use of auxiliary cameras greatly reduce the workload of installation and debugging.
- **Supports for different cameras**
  REACH Kite 7 supports the connection and tracking of various SD and HD cameras from market popular brands.

Interface



1	Power Input
2	Video In (CVBS)
3	Line Out (Reserved and not in use)
4	Mic In (Reserved and not in use)
5	Line In (Reserved and not in use)
6	LAN
7	COM (RS232)

Based on image analysis technology, REACH Kite 7 camera tracking system is used in the teaching, training, and seminar scenarios to automatically track the movement of the target presenter. Kite 7 is configured based on the IP network. The configuration interface is intuitive, simple, and easy to use, allowing the administrator to adjust the configurations as needed. Kite 7 can work together with Reach recording and streaming system.



KITE TOOL

Specifications

PTZ protocol	VISCA
Tracking mode	Auto/Manual
Setting mode	Visualized intuitive setting based on real-time images
Number of trigger areas	1
Support for manual PTZ control	Support
Video format	PAL and NTSC
System	Embedded operating system
Management mode	Debugging: KITE TOOL (a debugging software for auto-tracking) IP configuration and upgrade: Web interface PTZ protocol: VISCA
Power	Operating voltage: DC12V /3A Power consumption: 8W
Dimensions	Length: 240mm (9.45") Width: 170mm (6.70") Height: 44.5mm (1.75") Weight: 1.35Kg
Environmental	Relative humidity: 5 to 95% Operating temperature: -20 to 60°C (-4ºF~140ºF) Storage temperature: -40 to 80°C (-40ºF~176ºF)

Bee Keeper

Functions

Signal monitoring
- Monitor video, audio, and VGA signals transmitted from the classroom, lecture hall, and training room.
- Signal from a maximum of 9 rooms can be monitored at a time.

Device controlling
- Start/pause/stop recording.
- Remote controlling the camera.

Working status monitoring and maintenance
- Monitor the working status of the capture device and view alarm messages in case of a fault.
- Upgrade and rolls back the version of the capture device.
- Download and deletes files on the capture device.
- View operating logs exported from the capture device.

Supports authentication login onto the capture device
- Supports the authentication login onto the capture device based on different administrative privileges.

REACH Bee Keeper is a kind of software used to manage and monitor the operating status of REACH capture devices in a centralized manner. Reach Bee Keeper supports the authentication login onto the devices. Authorities for management of devices in different rooms can be assigned to different users.

Specifications

Minimum Requirements	
OS	XP and Windows 7
Ram	2G
CPU	Intel® Core™ i5 Processor
Network Interface Card	100M

Media Center

Functions

Management and allocation of device resources
Manage REACH recording and streaming devices in a centralized manner. This function supports the configuration, operation, and maintenance of the device and allocate device resources by classrooms. In addition, it supports the manual control of recording and the configuration of recording schedule.

User management
Manage all kinds of users in the organization, including teachers, students, administrators, and IT personnel. This function assigns different system privileges to different users and supports data synchronization among Lightweight Directory Access Protocol (LDAP) users.

File editing
Enables users to edit files through servers, so that users are not required to download files to the local for editing and upload the edited file for release.

File management and release
Manages files by types and assigns different access rights to different users. This function enables users to release files to the platform of the media center and to learning management systems such as Moodle and BlackBoard. In addition, this system supports RSS for release notifications. The files are accessible from windows PC, MAC computer, and mobile devices.

Portal function
Provide users with a portal page, allowing users to access their own resources through a unified interface. The portal page supports the content management system (CMS) so that schools can customize the portal page as needed.

Workflow management
Supports the scheduled recording, server-based file editing, and different file release modes (direct release or release after the verification of the Course Manager).The workflow is simple and adjustable as needed.

Integration with the LMS/CMS
Supports LDAP and the Single Sign On. Reach is the building block partner of BlackBoard and integrates seamlessly with LMS/CMS systems including BlackBoard and Moodle.

Data statistics
Display the statistics about on-line users, streaming users, and video playing rates.

Specifications

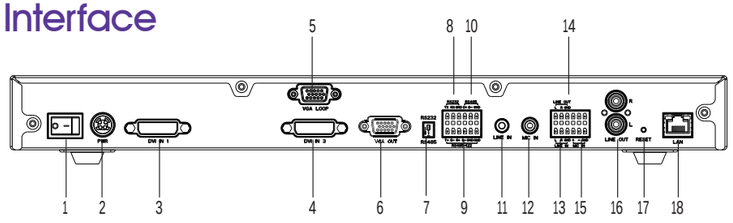
OS and Minimum Hardware Requirements	Linux (CentOS 6.0) X86 architecture CPU: 2×Quad-core processor RAM: 4GB Storage: 1TB Network interface card: 1000M
Recommended Hardware Server	PowerLeader PR2012NS Dell poweredge R710 HP 380G7 HP180G Dell poweredge R710 IBM X3650m3 Great Wall Zhi xiang R520
Capture Device Management	Setting and configurations of Reach capture device Record operating control
Schedule Management	Single schedule and cycle schedule by day, week, month Supports schedule table by importing Excel file
Content Management	File group management Video access by individual user and group Supports search file by metadata Supports 3rd part media upload (most of mp4, avi, wmv, asf, mkv, flv, 3gp, ts file.)
OCR	Supports character recognition from VGA input
Editing	Cut, delete stream and merge Edit OCR content Modify file info
User Management	Supports user group management Define system privileges by individual user and group Supports LDAP
Portal Page	Supports CMS (Content Management System) Supports portal page customizing by institute
Publishing	Publishs to Media Center portal page Publishs to BlackBoard, moodle and other LMS Supports publish control by course manager
Playing Back	Playback on Windows and Mac computers Web browser support: IE, Firefox, Chrome and Safari Playback on iOS and Android mobile device (HTML5)
Streaming Capabilities	Supports live streaming and video play on-demand Supports 1000 ways @384kbps
System Function	System log Warning notification Video playing statistics Email notification
Storage	Supports iSCSI network storage Supports RAID

Bee 8 Pro BEE81

Key Features

- **High quality videos**
  Bee 8 Pro supports up to 1080p HD video input and presentation.
- **Easy to start**
  Supports one-key recording and allow operation through multiple modes based on the front panel, mobile device, or Central Control System.
- **USB storage**
  Supports the storage and download of recording files to USB devices.
- **MP4 file format**
  MP4 storage format and is compatible with different players.
- **Supports local playback**
- **Supports FTP**

Interface



1	Power Switch	7	RS232/485 Switch	13	Line In 1
2	Power Input	8	RS232	14	Line Out 2 (balanced)
3	Video In	9	RS485	15	Mic In 2 (balanced)
4	VGA In	10	RS485/422	16	Line Out 2
5	VGA LOOP	11	Line In 1 (unbalanced)	17	Reset
6	Decoding Output	12	Mic In 1 (unbalanced)	18	LAN

REACH Bee 8 Pro is a product specialized for recording in training and meeting scenarios. Bee 8 Pro supports both SD and HD video capture. It supports recording, live streaming and playback of video signals and presentation signals. It's easy to install and operate, and is therefore suitable for various enterprises and organizations.

Specifications

Capture Options	Video (HD/SD) + VGA Video (HD/SD) + HD Video
Video	Input format: HDMI, DVI, RGBHV, YPbPr, CVBS HDMI and YPbPr: 720P@50@60, 1080i@50@60, 1080p@25@30@50@60 CVBS: 480i, 576i (NTSC and PAL)
VGA	Resolution from 640*480 to 1600*1200 Supports HDMI, VGA and DVI input Supports input from computer, visualizer and electric whiteboard
Encoding	Encoding: H.264 HP High frame rate up to 30fps Bitrate from 128Kbps to 20Mbps
Audio	Supports balanced and unbalanced audio in Provides mixing of mic in and line in
File Format	MP4 Resolution: D1, 720p, 1080p Picture-in-picture and Picture-by-picture
Storage	Capacity of 500GB Around 1000 hours recording Supports FTP
Local Decoding	Output resolution: 1024*768,1280*1024,1280*720,1400*1050
Management and Operation	Control Panel (optional) iPad Web page Reach Manager Central Control System Reach Media Center Supports camera control
Dimensions	Length: 430mm (16.93") Width: 332mm (13.07") Height: 44.5mm (1.75") 19-inch rack-mountable, 1U height
Environmental	Operating temperature: 0°C~50°C (32ºF~122ºF) Operating humidity: 5% to 95%
Power	12V/9.2A, 70W

Trial Master

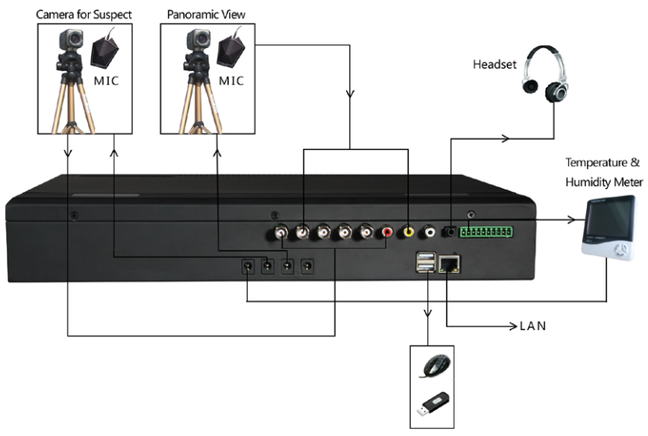
Stationary version (TM1)

Portable version (TM2)

Functions

- Reach Trial Master is equipped with dual DVD-ROMs to record real-time data in the trial process. It provides functions of automatic disk formatting, disk packing, and basic data detection to meet the need of burning disks at the trial station. In this way, the disks recording the raw trial process can be archived as powerful evidence. The storage format of the disk data complies with the international standard MPEG-2 DVD-VOB.
- Reach Trial Master uses advanced technologies including disk video track encryption, disk video ID, and adopts a proven disk data encryption technology based on identification code for 3rd party data. The identification code is unique and automatically generated, which cannot be read or copied in the Trial Master and other players.
- In the scenario where the system is powered off unexpectedly during the trial process, the up-to-international-standard DVD power-off protection and data recovery technology used by REACH trial master can prevent the loss of disk-burning data, ensuring the data security on the evidence disk.
- Trial information (picture-in-picture of the trial scene and close-up picture of the criminal suspect) is burned concurrently and separately on the disk through dual channels. This mechanism can satisfy the different playback requirements for different video files.

Interface



REACH Trial Master uses a specialized reader with the optical track encryption function to burn trial (interrogation) contents on a disk for evidence archiving. REACH Trial Master provides solutions for recording trial process and burning trial results on the disk and therefore can be widely used by judicial institutes such as public security bureau, court, and procuratorate.

Specifications

Video encoding format of the direct-burning disk	Standard DVD format that supports the MPEG-2 encoding format
File type	VOB format with the frame transmission rate of 25fps
Audio sampling rate	48KHz
Audio bit rate	256Kbps
Real-time burning duration of the 4.7G disk	1, 2, 3, 4, 6, and 10 hours are optional in MPEG-2 mode
Disk encryption anti-counterfeiting	Optical track 4D code encryption technology is enabled in the standard DVD packaging format
Disk data power-off protection	Automatic data recovery in case of disk power-off
Disk formatting	Auto
Encryption of the disk data	Auto
Pause during the disk	Support for the pause during the disk burning process
Encoding format of hard disk videos	H.264
Encoding format of hard disk audios	MP3
Hard disk data backup	Data backup in dual-channel and dual-interface (1. picture-in-picture, 2. Close-up of the criminal suspect) mode
Hard disk data code stream	Adjustable code transmission speed ranging from 64Kbps to 10Mbps
Hard disk data retrieval	Keyword-based retrieval
Hard disk data replication	Support for the mobile DVD-ROM, hard disk, U disk, and network download
Secure data synchronization and hot standby	Separate encoding of disk data and hard disk data (dual-mode hot standby)
Hard disk partition	With separate storage spaces for uploaded files (10GB) and video & audio files
Encoding format of network videos	H.264
Encoding format of network audios	MP3
Encoding size of network videos	D1 resolution 704x576
Network code stream	Adjustable code transmission speed ranging from 64Kbps to 10Mbps Support for the dual-code stream
Live streaming mode of network video pictures	Embedded Web service, single picture and picture-in-picture transmission in dual-D1 synchronization mode
Network security	Three-level password protection
Network software upgrade	Network upgrade
Isolation of software- and hardware-related video and audio encoding faults	Separate tri-mode (dual-DVD ROM, hard disk storage, and network storage)
Video text overlay	Embedded Chinese and English fonts

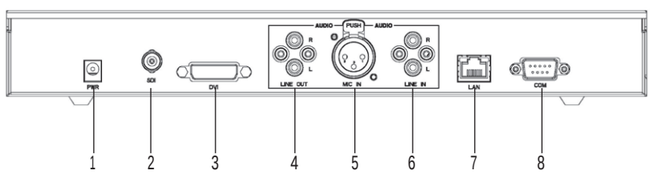
Visualization of audio information	Display of voiceprints in synchronization with pictures
Audio loss alarm	Voice or voiceprint mode
Sound quality adjustment	Digit
Text interaction	Remote p2p text interaction
Picture synthesis format	Single picture, dual-picture, picture-in-picture, 3 pictures, 3+1 pictures, and 4 pictures
Image adjustment	Brightness, contrast, hue, and saturation
Overlay of temperature and humidity information collecting videos	RS-485 dynamic data video overlay
PTZ control	RS-485
Equipment operation mode	Button, mouse, and network
Video input	4-ch BNC PAL, 50 pcs
Audio input	2-ch RCA
Video output	1-ch BNC and 1-ch VGA
Audio output	1-ch RCA
Network audio intercom output	1-ch headphone 3.5mm
Network interface	10M/100M adaptive Ethernet interface
Communication interface	Two-way RS-485
USB interface	Two USB2.0 interfaces
Hard disk	One built-in SATA hard disk
AV real-time burned DVD-ROM	Two built-in DVD-ROMs
LED information window	2PCS
Listening	8Ω3W (portable)
LED screen	15.6-inch 16:9 (portable)
Camera	Integrated machine with auto-zoom lens (portable)
Sensitivity of audio pickup	-80 to -30dB (portable)
Frequency range of audio pickup	20-16 KHz (portable)
Frequency response of audio pickup	20-8 KHz (portable)
Frequency distortion of audio pickup	≤0.5% (portable)
Frequency gain of audio pickup	30dB (portable)
Power input	AC220/240V
Power consumption	65W
Suitable temperature	-5°C to 45°C (23°F~113°F)
Suitable illumination	Less than 2lux
System noise	≤3.5dB
Dimensions	Stationary: 440mm x 395mm x 88mm (17.32" x 15.55" x 3.46") Portable: 398mm x 300mm x 66.4mm (15.67" x 11.81" x 2.61")

HD Encoder ENC1260

Key features

- **H.264 HP encoding**
  Adopting H.264 HP video codec, ensure an IP-based signal transmission.
- **High video quality**
  Provides a high video quality with the 30fps/second and up to 1080p definition.
- **High VGA-resolution**
  Supports capture VGA signals with the maximum resolution of 1920x1200@60Hz.
- **Bandwidth control**
  Use advanced technology to strictly control the bandwidth and ensure the transmission quality.
- **Flexible parameter settings**
  Supports the flexible configuration of parameters such as GOP, MTU, TTL, and TOS.
- **Low delay**
  Deliver video to clients in sub-second.
- **SDK available**
  Provides an SDK to facilitate the integration with 3rd party video and audio systems.
- **Supports RTSP and TS**
- **Supports PTZ camera control**

Interface



1	Power Input	4	Line Out (reserved)	7	LAN
2	HD SDI In	5	MIC In (XLR)	8	COM (RS232)
3	DVI-I In	6	Line In		

REACH ENC1260 is used to capture HD video signals. It can capture video signals up to 1080p and VGA signals with the maximum resolution of 1400 x1050. With HD Encoder (ENC1260), various HD videos and VGA signals can be easily transmitted on the IP network as needed. Adopting H.264 HP video codec, ENC1260 provides a high image quality with less bandwidth consumption.

Specifications

Management	Web interface EncoderManager
SDI Input	480i, 576i, 1280×720p@50@60, 1920×1080i@50@60, 1920×1080p@25@30
DVI-I Input	480I, 576I, 1280×720p@50@60, 1920×1080i@50@60, 1920×1080p@25@30@50@60
DVI-VGA Input	640×480@60@72@75@85, 800×600@60@72@75@85, 1024×768@60@70@75@85, 1280×720@60, 1280×768@60, 1280×800@60 1280×960@60, 1280×1024@60@75, 1366×768@60, 1400×1050@60 1440×900@60
Frame Rate	1 to 60fps
Audio Sampling Rate	44.1K 48K
Encoding	Video: H.264 HP Audio: AAC
Bandwidth Control	128Kbps to 20Mbps CBR
Dimensions	Length: 350mm (13.78") Width: 219mm (8.62") Height: 44.5mm (1.75")
Environmental	Operating temperature: 0ºC to 50ºC (32ºF~122ºF) Relative humidity: 5% to 95% Storage and transport temperature: -20ºC to 80ºC (-4ºF~176ºF)
Power	DC 12V/3A, 10W

Reach H.323

Network Recording and Streaming Server

Key features

Recording

This Network Recording and Streaming Server is based on IP network. It can synchronously record video, audio signal and computer screen signal at the videoconference. It can simultaneously record multiple conferences.

Live Streaming

It is with powerful live streaming function. It can do live streaming video, audio and computer screen, at a clear smooth receipt. It supports live streaming in various formats (e.g. CIF/4CIF/720p/1080p) and the high-resolution conference (maximum 1080p/30Hz), to bring about a meticulous visual experience.

Video On-demand

It's webpage-based player, log into server and play the file on demand, via the browser. The video conference terminal can make the on-demand playback at the point-to-point mode.

Recording Control

MCU and terminal can directly call for recording, i.e. the recording task can be automatically created as long as the call connection is established.
Supports record for video conference at the terminal point-to-point mode.

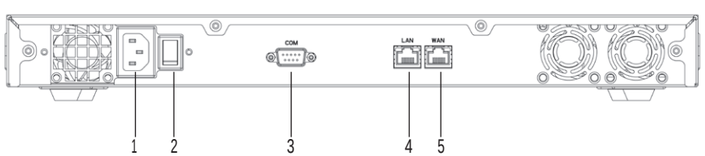
Strong Compatibility

Compatible to the MCU and video terminal device of various brands work with H.323 standard.

High Reliability

The embedded operating system is stable and reliable. It can be run continuously for 7×24 and MTBF>120,000h. It supports the RAID1 disk array function, and guarantees the reliable saving of recording file.

Interface



1	Power Input	3	COM (RS232)	5	WAN
2	Power Switch	4	LAN		

REACH H.323 Network Recording and Streaming Server is the latest-generation multi-media recording and streaming system independently developed by REACH to meet the recording and streaming demand of video conference industry. This system can adapt to all MCUs and terminal products of standard H.323, support the multiple conferencing, and record the conference at multiple speeds and multiple modes. It can also realize various functions, e.g. live streaming, video playing on-demand, remote management and file management. It is easy to operate/manage, and stable to run. It can meet the demand of visual information recording/transmission at various scenes (e.g. conference, training and teaching).

Tested device

Manufacturer	Device	Model
HUAWEI	MCU	8650
	Terminal	9036,9039,9039S, 8036
ZTE	MCU	MVC8900
	Terminal	T502, T600
Polycom	MCU	MGC50, RMX1000, RMX2000
	Terminal	HDX6000, HDX7000, HDX8000, HDX9000, VSX5000, M500, M100
RadVision	MCU	Elite series (5110, 5230),SCOPIA 24
	Terminal	XT1000, XT1200, XT4000, XT5000
Aethra	Terminal	X5, X7
Lifesize	Terminal	Room 220, Team 220
Cisco	Terminal	C20, C40, C60, C90
SONY	Terminal	XG50, XG80
DVISION	Terminal	focus 3800
AVer	Terminal	HA100, HA300

Note: The above device models have been verified as the compatible devices, and are only for reference. Due to numerous H.323 devices available in markets and the limitation of actual test environmental resources, other devices not mentioned above should be subject to the actual test results.

Specifications

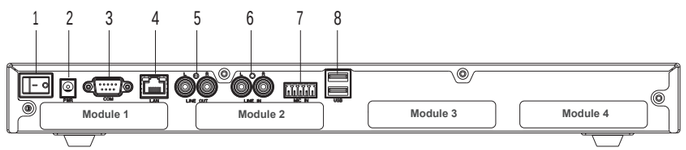
Parallel recording	Standard version: Record in parallel maximum 5 groups of 1080p 30 high-resolution conference Advanced version: Record in parallel maximum 10 groups of 1080p 30 high-resolution conference
Live streaming	Standard version: Play on Web in live parallel 50 concurrent users Advanced version: Play on Web in live parallel 100 concurrent users
Video encoding protocol	H.264 HP, H.263, H.261
Audio encoding protocol	G.711A, G.711U, G.722, G.722.1, G.723.1, G.728, G.729
Communication protocol	H.323V4, H.225, H.245, H.239
Video format	QCIF, CIF, 4CIF, VGA, SVGA, XGA, 720p, 1080p
Bit rate	128Kbps~8Mbps
Frame rate	1~30 f/s
Recording file format	MP4
External storage	Supports the external network storage of FTP, Samba, NAS, iSCSI
Recording capacity	Standard version: 1TB (1Mbps×2000h) Advanced version: 2TB (1Mbps×4000h)
Physical property	Server dimension: 430mm (16.93") x 373mm (14.69") x 45mm (1.77") Weight: 8kg
Network interface	2 Ethernet interfaces of 10M/100M/1000M
Electric index	Working voltage: 220V/50Hz Power: 60W

Media Master *Beyonsys™*

Features

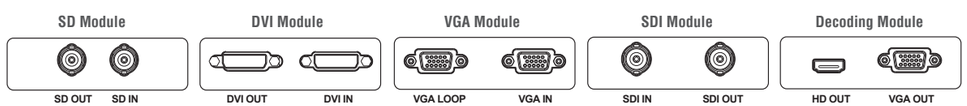
- **Synchronized recording**
  Record video, audio, and VGA signals in synchronization.
- **Local decoding output (optional function)**
  Provides interface for output of decoded signals for monitoring the recording process and play back the local files.
- **Web-based player**
  Supports different browsers of Window and Mac OS such as IE, Firefox, Chrome, and Safari and requires no additional player.
- **Scheduled recording**
  Start or stop recording as scheduled.
- **File storage**
  Provides 1TB built-in storage space and supports 3rd party FTP servers.
- **Server-based editing**
  Provides a built-in web-based editor and supports the editing of recorded files.
- **Supports PTZ camera control**
- **Supports the CCS provided by manufacturers such as AMX and CRESTRON**

Interface



1	Power Switch	5	Line Out
2	Power In	6	Line In
3	COM (RS232)	7	MIC In
4	LAN	8	USB

Modules



REACH Media Master is a powerful all-in-one machine allowing multiple signals to be recorded and streamed concurrently. It provides functions of signal capture, signal recording, video live streaming and video playing on-demand. Reach Media Master can be installed with multiple types of capture modules and supports the concurrent signals input from a maximum of three signals. REACH Media Master (Beyonsys™) can be widely used in organizations such as enterprises, governments, and schools.

Specifications

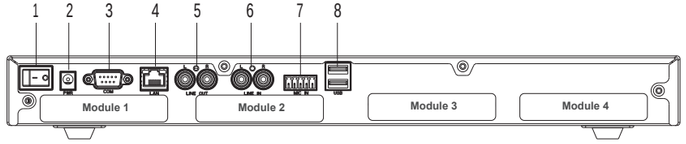
SD Module	Definition	CIF; 4CIF; NTSC/PAL
	Bitrate	256Kbps-2000Kbps
	Framerate	30fps
HD SDI Module	Definition	1280×720p@50@60; 1920×1080i@50@60; 1920×1080p@25@30
	Framerate	30fps
DVI Module	Definition	1280×720p@50@60; 1920×1080i@50@60; 1920×1080p@25@30@50@60
	Bitrate	128Kbps-10000Kbps
	Framerate	30fps
VGA Module	Resolution	640×480 800×600; 1024×768 1280×720; 1280×768 1280×800; 1280×900 1280×960; 1280×1024 1366×768; 1400×1050 1440×900
	Bitrate	256Kbps-2000Kbps
	Framerate	1-30fps (Adjustable)
DEC Module		VGA out; HDMI out
Audio		Line in; Mic in
Bitrate		64Kbps, 128Kbps
Encoding	Video	H.264 HP
	Audio	AAC
Decoding capability		Maximun 2×720p+1×VGA; Or 1×1080p
Storage		1TB Enterprise-class Hard Drive; Support FTP upload function
Environmental	Operating temperature	-20ºC to 50ºC (-4ºF~122ºF)
	Relative humidity	5% to 95%
	Storage and transport temperature	-40ºCto 80ºC (-40ºF~176ºF)
Dimensions	Length	430mm (16.93")
	Width	373mm (14.69")
	Height	45mm (1.77")
	19" rack-mountable, 1U height	
Power		100-240VAC, 50-60Hz, 55W

Media Master *Powolive™*

Feature

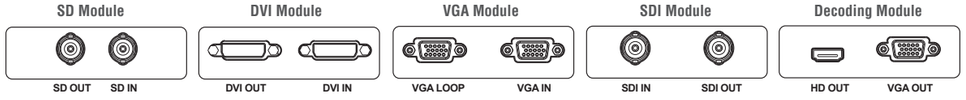
- **4-ch HD/SD/VGA signal inputs**
  Supports the synchronized signal processing from a maximum of four inputs.
- **Low delay**
  Live streaming delay less than 0.5s.
- **Synchronized recording**
  Record video, audio, and VGA signals in synchronization.
- **Full HD**
  Supports HD video signals of 1080p.
- **Local decoding output (optional function)**
  Provides interface for output of decoded signals for monitoring the recording process and play back the local files.
- **Scheduled recording**
  Start or stop recording as scheduled.
- **File storage**
  Provides 1TB built-in storage space and supports 3rd party FTP servers.
- **Supports PTZ camera control**
- **Supports the CCS provided by manufacturers such as AMX and CRESTRON**

Interface



1	Power Switch	5	Line Out
2	Power In	6	Line In
3	COM (RS232)	7	MIC In
4	LAN	8	USB

Modules



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Specifications

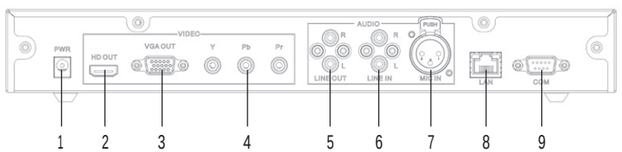
SD Module	Definition	CIF; 4CIF; NTSC/PAL
	Bitrate	256Kbps-2000Kbps
	Framerate	30fps
HD SDI Module	Definition	1280×720p@50@60; 1920×1080i@50@60; 1920×1080p@25@30
	Bitrate	128Kbps-10000Kbps
	Framerate	30fps
DVI Module	Definition	1280×720p@50@60; 1920×1080i@50@60; 1920×1080p@25@30@50@60
	Bitrate	128Kbps-10000Kbps
	Framerate	30fps
VGA Module	Resolution	640×480 800×600; 1024×768 1280×720; 1280×768 1280×800; 1280×900 1280×960; 1280×1024 1366×768; 1400×1050 1440×900
	Bitrate	256Kbps-2000Kbps
	Framerate	1-30fps (Adjustable)
DEC Module		VGA out; HDMI out
Audio		Line in; Mic in
Bitrate		64Kbps, 128Kbps
Encoding	Video	H.264 HP
	Audio	AAC
Decoding capability		Maximun 2×720p+1×VGA; Or 1×1080p
Storage		1TB Enterprise-class Hard Drive; Support FTP upload function
Environmental	Operating temperature	-20ºC to 50ºC (-4ºF~122ºF)
	Relative humidity	5% to 95%
	Storage and transport temperature	-40ºCto 80ºC (-40ºF~176ºF)
Dimensions	Length	430mm (16.93")
	Width	373mm (14.69")
	Height	45mm (1.77")
	19" rack-mountable, 1U height	
Power		100-240VAC, 50-60Hz, 55W

HD Decoder DEC1000

Features

- **Receiving of live streaming signals**
  Receive video and audio signals from the live streaming server through IP networks.
- **Low delay**
  Reduce the live streaming delay to less than 0.5s.
- **File VOD**
  Play video files from the server on demand through IP networks.
- **Multi-stream mode**
  Supports the concurrent display of a maximum of 3 videos and supports to enlarge any video.

Interface



1	Power Input	4	Component Out	7	MIC In (XLR)
2	HDMI Out	5	Line Out	8	LAN
3	VGA Out	6	Line In (reserved)	9	COM (RS232)

REACH HD Decoder is a hardware decoder specialized for the REACH recording and streaming system. It receives audio and video signals from the live streaming server or video and audio files from the VOD server through IP networks. HD Decoder is configured with a remote control and supports the connection to display devices such as TV, LCD screen, plasma, and projector.

Specifications

Operation	Remote control Central control system (AMX, CRESTRON etc.)
Output Resolution	1024 × 768 1280 × 720 1280 × 1024 1920 × 1080
Decoding	Video decoding: H.264 HP Audio decoding: AAC
Dimensions	Length: 330mm (12.99") Width: 230mm (9.06") Height: 44.5mm (1.75")
Power	DC12V /3A, 10W
Environmental	Operating temperature: 0ºC to 50ºC (32ºF~122ºF) Relative humidity: 5% to 95% Storage and transport temperature: -20ºC to 80ºC (-4ºF~176ºF)

EncoderManager

EncoderManager displays video/VGA signals and play audio signals from encoder. It means that EncoderManager can monitor the working status and signal inputs of the Reach encoders. With EncoderManager, the administrator can configure and manage encoders on the network in a centralized manner.

Functions

- **Real-time monitoring**
  Monitor video and audio signals from the classroom, training room, and simulation room in real time.
- **Centralized management**
  Manage, configure, and upgrade Reach encoders in a centralized manner.

Editor

Reach Editor is used to edit and transcode recording files from the Powolive™ platform to single-stream FLV and WMV file.

Functions

- **Cutting**
  Cut any part from a file.
- **Merging**
  Merge multiple files into one file, and add opening and ending pictures to embellish the files.
- **Transcoding**
  Convert a multi-stream video file to a single-stream FLV or WMV file.

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